Nine Metal Fabrication and Finishing Source Categories

Subpart XXXXXX
Promulgation of Standard: July 23, 2008

Nine Metal Fabrication and Finishing Source Categories

- **Affected Sources: Area sources of hazardous air pollutants** (HAP): (those that have the potential to emit at a rate of <10 tons per year of any single HAP or < 25 tons per year of combined HAPs)

- **Source that use materials that contain or have the potential to emit metal fabrication or finishing metal HAP (MFHAP)**
  - **Compounds of cadmium, chromium, lead, manganese, and nickel**
  - Containing ≥ 0.1% by weight of cadmium, chromium, lead or nickel or materials containing ≥ 1.0% by weight of manganese.

- **Primarily engaged in one of the nine operations listed below and are in one of these Source Categories:**

(1) Electrical and electronic equipment finishing operations
(2) Fabricated metal products manufacturing
(3) Fabricated plate work (boiler shops) manufacturing
(4) Fabricated structural metal manufacturing
(5) Heating equipment manufacturing, except electric
(6) Industrial machinery and equipment finishing operations
(7) Iron and steel forging
(8) Primary metal products manufacturing and
(9) Valves and pipe fittings manufacturing

Refer to Applicability Flowchart Slides-On Your CD

Flow Charts For Determining Your Requirements:
Nine Metal Fabrication and Finishing Source Categories
Area Source NESHAP (subpart XXXXXX)

CHART 1 – ABRASIVE BLASTING REQUIREMENTS

CHART 2 – ALL OTHER REQUIREMENTS (NOT ABRASIVE BLASTING)

CHART 3 – REQUIRED MANAGEMENT PRACTICES: MP #1 THROUGH MP #6

CHART 4 - GRADUATED VISIBLE EMISSIONS (VE) MONITORING

CHART 5 – EMISSIONS MONITORING AT WELDING SOURCES: TIER 1

CHART 6 – EMISSIONS MONITORING AT WELDING SOURCES: TIERS 2 AND 3

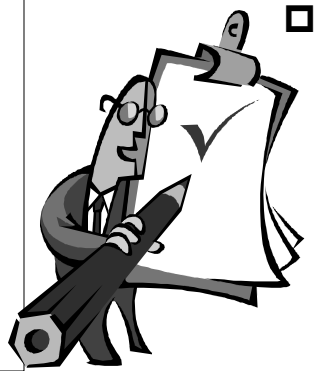
CHART 7 – NOTIFICATION, REPORTING & RECORDKEEPING

Nine Metal Fabrication and Finishing Source Categories

- **Compliance Dates:**
  - Existing Sources: July 25, 2011
  - New Sources (commenced construction or reconstruction source on or after 4/3/08):
    - July 23, 2008 or upon startup of your affected source, whichever is later

- **Initial Notifications due:**
  - Existing Sources: July 25, 2011
  - New Sources: 120 days after startup or November 20, 2008, whichever is later

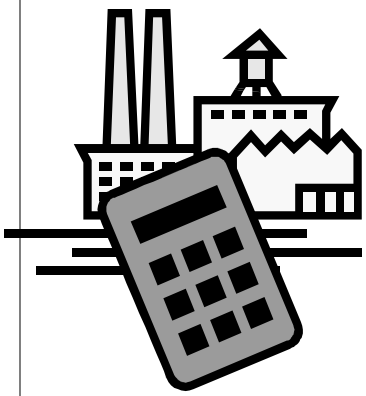
- **Compliance Status Notification due:**
  - Existing Sources: November 22, 2011
  - New Sources: 120 days after startup or November 20, 2008, whichever is later



Dry Abrasive Blasting Requirements

- **<u>Performed in Completely Enclosed and Unvented Blast Chambers</u>:**
  - Minimize dust generation during emptying of the enclosure
  - Operate all equipment used in the blasting operation according to manufacture's instructions

- **<u>Performed in Vented Blast Chambers</u>:**
  - Must perform blasting with a control system that includes an enclosure as a capture device, and a cartridge, fabric, or HEPA filter as a control device
  - As practical, take measures necessary to minimize excess dust in the surrounding area
  - Enclose abrasive material storage areas and holding bins, seal chutes and conveyors transporting abrasive materials
  - Operate all equipment according to manufacturer's instructions



Dry Abrasive Blasting Requirements

- **<u>Blasting Operations of Objects >8 Feet in Any Dimension that do not have Control Systems:</u>**
  - Switch from high particulate matter (PM)-emitting blast media (e.g., sand) to low PM-emitting blast media (e.g., crushed glass, specular hematite, steel shot, aluminum oxide) whenever practicable
  - Do not re-use the blast media unless contaminants (i.e., any materials other than the base metal, such as paint residue) have been removed by filtration or screening so that the abrasive material conforms to its original size and makeup
  - Enclose abrasive material storage areas and holding bins, seal chutes and conveyors transporting abrasive materials
  - Operate all equipment according to manufacturer's instructions

Standards for Dry Grinding and Dry Polishing with Machines

- ***Exemption:*** Dry grinding and dry polishing operations performed with hand-held or bench-scale devices do not have to follow the requirements below.

- Capture particulate matter (PM) and vent the exhaust to a cartridge, fabric or HEPA filter

- As practicable, take measures necessary to minimize excess dust in the surrounding area to reduce PM emissions

- Operate all equipment used in dry grinding and dry polishing with machines according to manufacturer's instructions

Standards for Machining

- As practicable take measures necessary to minimize excess dust in the surrounding area to reduce particulate matter (PM) emissions

- Operate equipment used in machining operations according to manufacturer's instructions

Spray Painting Requirements

- **Use of spray booths or spray rooms equipped with particulate matter (PM) filters**
  - *Exemption:* Spray painting of objects > 15ft in any dimension and spray painting at fabricated structural metal manufacturing facilities are not subject to this requirement there are other requirements for these facilities in the rule.

- **Spray booth or room requirement**: (choose either option)
  - Booth or room must be fitted with fiberglass or polyester fiber filters or other comparable filter technology that has been demonstrated to achieve at least 98% control efficiency of paint overspray.

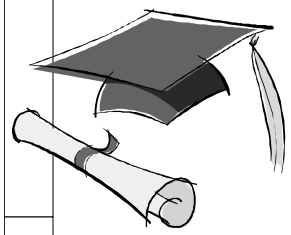
  - Spray booth or room can be equipped with a water curtain, called a "waterwash" or "waterspray" booth

Spray Painting Requirements

- **Use of low-emitting and pollution preventing spray gun technology**
  - Facilities using spray applied paints **must use HVLP spray guns, electrostatic application or airless spray techniques** (you can seek approval if you are using equivalent spray equipment-see rule for details)

- **Spray Painter Training**

  All spray painting workers must be trained and certified



  - Existing sources: July 23, 2011
  - New Sources: October 28, 2008
    - **New Employees** must be trained 180 after hiring
  - **Training and certification is valid for 5 years. Workers must recertify every 5 years.**

- **Spray Gun Cleaning**

  All paint spray gun cleaning operations must be done either:
  - With non-HAP gun cleaning solvents

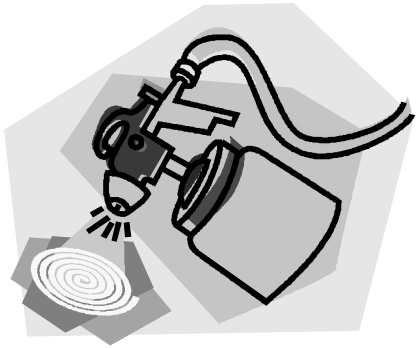
    OR
  - In such a manner that an atomized mist or spray of spray gun cleaning solvent and paint residue is not created outside of a container that collects the gun cleaning solvent.

Comparison with Subpart HHHHHH

- If a facility is **complying with 40 CFR 63 Subpart HHHHHH** (Paint Stripping and Misc. Surface Coating) then they **don't have to comply** with this standard

- **Virtual Paint Training** described before in Subpart HHHHHH fulfills the training requirements for this rule

- Training requirement and equipment requirements for painters in this rule are same as Subpart HHHHHH



Spray Painting Requirements

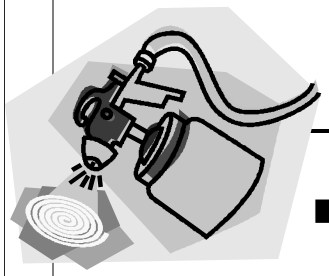
- **Spray Painting of Objects ≥ 15 Feet in Any Dimension**

OR

- **Spray Painting, at Fabricated Structural Metal Manufacturing Facilities, not Performed in a Paint Booth**

  - Must use low-emitting and pollution preventing spray gun technology
  - The spray painter training and spray gun cleaning requirements listed in the previous slide.
  - Spray Gun Cleaning and Painter Training requirements listed on previous slide

Records Required by Spray Painting Operations



- Spray paint booth filter records
- Waterspray booth or water curtain efficiency testing records
- Documentation records for HVLP or high transfer efficiency spray system
- Training documentation records
- Annual Certification and Compliance Reports-see (b)(2) through (7) for details

Standards for Welding

- You must operate all equipment, capture, and control devices associated with welding operations according to manufacturer's instructions. You maintain records of manufacture's specifications for the capture and control devices.

- **You must implement one or more of the following management practices:**
  - Use welding processes with reduced fume generation capabilities (e.g., gas metal arc welding (GMAW))
  - Use welding process variations (e.g., pulsed current GMAW), which can reduce fume generation rates
  - Use welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation
  - Optimize welding process variables to reduce the amount of welding fume generated
  - Use a welding fume capture and control system, operated according to the manufacturer's specifications

Standards for Welding

- If your welding affected source **uses 2,000lb or more/year of welding rod containing one or more MFHAP** (compounds of cadmium, chromium, lead, manganese, and nickel); you must comply with the requirements on the previous slide and the following:

  - **You must perform visual determination** of welding fugitive emissions as specified in 63.22517(b). You must keep record of all visual determinations along with any corrective action taken in accordance with 63.11519(c)(2).

  - **If visible emissions** from welding **are found** you must comply with the rule requirements in (f)(4) through (f)(8).

Recordkeeping Requirements for Welding

- Welding operations that **use ≥ 2,000 lb/year of welding rod** containing one or more MFHAP (compounds of cadmium, chromium, lead, manganese, and nickel) **must keep the following records**:
  - Visual Determination of fugitive emissions records
  - Visual determination of emissions opacity records
  - Site-specific welding emissions management plan
  - Welding rod usage

Area Source Forms and Summaries

- **EPA's Area Source Rule Website:**

  http://www.epa.gov/ttn/atw/area/arearules.html#remain

- **NDEQ Website has Area Source:**

  http://www.deq.state.ne.us/

  - Go to NDEQ News then EPA Rules-item posted 6/25/08

- **Electronic Code of Federal Regulations (CFR):**

  http://ecfr.gpoaccess.gov/

Contact Information

- **Allison Zach,** NDEQ MACT Coordinator
- 402-471-4103
- allison.zach@nebraska.gov